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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/704,208	11/01/2000	Heikki Wikstedt	796.375USW1	4676

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EXAMINER

TRINH, SONNY

ART UNIT PAPER NUMBER

2685

DATE MAILED: 06/10/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/704,208

Applicant(s)

WIKSTEDT ET AL.

Examiner

Sonny TRINH

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-16 and 19-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6,8-16 and 19-21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings correction filed on 04/06/04 have been received and accepted by the Examiner.

### *Allowable Subject Matter*

2. The indicated allowability of **claims 1-6, 8-10** are withdrawn in view of the newly discovered reference(s) to DeSantis et al. (U.S. 6,728,540) and Bodin (WO 98/15150) respectively. Rejections based on the newly cited reference(s) follow.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3, 10-13, 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSantis et al. (U.S. 6,728,540) in view of Bodin (WO 98/15150).

Regarding **claims 1, 11**, DeSantis discloses a handover-method in a cellular radio system including base transceiver stations and mobile stations, in which cellular radio system at least two frequency bands are used, and wherein each base transceiver station transmits a broadcast intended for all mobile stations in a first frequency range,

in which method handover to the second frequency range is started (columns 5-6, specifically lines 22-50 of column 5). However, DeSantis does not disclose the bursts sent by a mobile station (MS) and relating to the handover signaling are measured at the base transceiver station (BTS), and the measurement results are compared with a pre-established criterion, and handover is completed only when the criterion is met.

In an analogous art, Bodin teaches a device and method in a cellular mobile telephone system. Bodin further teaches that the bursts sent by a mobile station (MS) and relating to the handover signaling are measured at the base transceiver station (BTS), and the measurement results are compared with a pre-established criterion, and handover is completed only when the criterion is met (abstract, figure 3, pages 15 line 13 to page 16 line 10).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the mobile system of DeSantis, the burst signal, as taught by Bodin, so that a communication handshake between the mobile and the base station can be performed before a handover so that the system can minimize any possible handover error.

Regarding **claims 2, 12**, Bodin further teaches that handover is interrupted, when the established criterion is not met, and the communication between mobile station and network is continued on the initial channel, from which the handover started (pages 15-16).

Regarding **claims 3, 13**, the combination of DeSantis and Bodin discloses the invention but does not disclose that the mobile station (MS) is notified of the handover

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interruption. However, it is well known in the art that if the handover is not going to be granted, the base station controller can either ignore the handover request or send a signal to the requesting mobile station informing the mobile station that the handover request has been denied and it would have been obvious for a skilled person in the art to send an interruption to the mobile station to inform it of the denying of the handover request so that overhead signal can be minimized.

Regarding **claim 10**, the combination of DeSantis and Bodin discloses the invention but does not disclose that the first frequency range is a frequency range of a lower frequency than the second frequency range. However, handoff between different systems such as the handoff between GSM, PCS, AMPS are well known (each system with a different frequency range) and the Examiner takes Official notice of the difference in frequency ranges so that the user can roam from one cell area to another cell area which supports a different system.

Regarding **claim 20**, this claim merely reflect the method for a communication system as opposed to the method claim of claims 1-2 (combined) and is therefore rejected for the same reasons.

Regarding **claim 21**, this claim merely reflect the method for a base transceiver station as opposed to the method claim of claim 1 and is therefore rejected for the same reasons.

4. **Claims 4-5, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSantis et al. (U.S. 6,728,540) in view of Bodin (WO 98/15150) and in further view of Dahlin ("Dahlin"; U.S. Patent Number 5,200,957).

Regarding **claim 4**, the combination of DeSantis and Bodin discloses the invention but does not disclose that the signal level of the mobile station's bursts is measured.

In an analogous art, Dahlin teaches a method for communication and handoff in a cellular radio system. Dahlin further teaches that the signal level of the mobile station's bursts is measured (abstract, claim 17).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of DeSantis and Bodin, the measurement of the mobile station's bursts, as taught by Dahlin, so that timing and synchronization can be achieved without interruption when a call is handed over to another base station.

Regarding **claim 5**, Dahlin further teaches the measuring of signal-to-noise ratio (column 1, specifically lines 37-48).

Regarding **claims 14-15**, these claims merely reflects the method claim as opposed to the apparatus claim of claims 4-5 and are therefore rejected for the same reasons.

5. **Claim 6, 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSantis et al. (U.S. 6,728,540) in view of Bodin (WO 98/15150) and in further view of Alajoki et al. ("Alajoki"; U.S. Patent Number 6,285,875).

Regarding **claim 6**, the combination of DeSantis and Bodin discloses the invention but does not disclose that the criterion is transmitted to the base transceiver station in connection with the channel assignment signaling.

In an analogous art, Alajoki teaches a traffic measurement system for use in mobile communications network. Alajoki further teaches that the criterion for handoff is transmitted to the base transceiver station in connection with the channel assignment signaling (column 3, lines 12-31).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of DeSantis and Bodin, the transmission of the criterion to the base station transceiver, as taught by Alajoki, so that the traffic can be distributed intelligently by not overloading a particular cell.

Regarding **claim 16**, this claim merely reflects the method claim as opposed to the apparatus claim of claim 6 and is therefore rejected for the same reasons.

6. **Claims 8-9, 18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSantis et al. (U.S. 6,728,540) in view of Bodin (WO 98/15150) and in further view of Dufour et al. ("Dufour"; U.S. Patent Number 5,878,349).

Regarding **claims 8-9**, the combination of DeSantis and Bodin discloses the invention but does not explicitly disclose that assigned for the connection the bursts of

connection request set-up and signaling received from the mobile station are measured at the base transceiver station.

In an analogous art, Dufour teaches a call set-up method for communication between analog voice channel and digital control channel. Dufour further teaches the connection request set-up and signaling from the mobile station to the base station (figure 1, column 4, specifically lines 4-18).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of DeSantis and Bodin, the call set-up request signal, as taught by Dufour, so that the mobile can assist the system in determining and choosing the best base station for hand-off.

Regarding **claims 18-19**, these claims merely reflect the method claim as opposed to the apparatus claim of claims 8-9 (respectively) and are therefore rejected for the same reasons.

## **Conclusion**

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*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, 6<sup>th</sup> Floor (Receptionist).*



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonny TRINH whose telephone number is 703-305-1961. The examiner can normally be reached on Monday-Thursday and on alternate Fridays.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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**SONNY TRINH**  
**PRIMARY EXAMINER**

6/8/04